CORRECTIONS

TOPICAL TOXICITY OF TOMATO SESQUITERPENES TO THE BEET ARMYWORM AND THE ROLE OF THESE COMPOUNDS IN RESISTANCE DERIVED FROM AN ACCESSION OF *LYCOPERISCON HIRSUTUM* F. *TYPICUM*, by S. D. Eigenbrode, J. T. Trumble, J. G. Millar,* and K. White. *J. Agric. Food Chem.* **1994**, *42*, 807–810.

In Eigenbrode et al. (1994) we reported on the insecticidal toxicity of a compound extracted and purified from an accession of wild tomato and identified by us as α -zingiberene. However, in light of a recent report of the isolation and identification of 7-epizingiberene, and not α -zingiberene, from another tomato accession (Breeden and Coates, 1994), we have reexamined the material used in our bioassays. Upon reexamination, the material used in our bioassays was indeed determined to be 7-epizingiberene, not its stereoisomer α -zingiberene. Specifically, under isothermal gas chromatography the compound we isolated has a small but reproducible difference in retention time from that of an authentic sample of α -zingiberene.

An authentic sample of zingiberene was isolated from commercial ginger oil, Zingiber officinale (Spectrum Chemical Co., Gardena, CA) in >99% chemical purity by formation of a Diels-Alder adduct with 4-phenyl-1,2,4-triazoline-3,5-dione (Aldrich Chemical Co., Milwaukee, WI) (Millar, 1998), purification of the adduct by flash chromatography, and hydrolysis of the adduct in refluxing ethanolic KOH (Barton et al., 1971, 1983). This authentic sample of zingiberene and the sample isolated by us from Lycopersicon hirsutum f. typicum PI 126445 have indistinguishable mass spectra (EI, 70 eV; Hewlett-Packard 6890 gas chromatograph interfaced to an H-P 5973 mass selective detector; GC column, HP5-MS, 30 m \times 0.25 mm i.d., 0.25 μ m film, programmed from 50 °C/1 min, 10 °C/min to 250 °C), and the retention times are identical under these conditions. However, the two samples could be distinguished on the basis of retention time by gas chromatography on a DB-17 column (30 m \times 0.32 mm i.d., 0.25 μm film, J&W Scientific, Folsom, CA; He carrier gas, head pressure 15 psi, 120 °C isothermal, split injection in hexane, samples 1 mg/mL). Under these conditions, the zingiberene from ginger oil had a retention time of 22.735 ± 0.004 min (mean \pm SD, n = 3), while the compound isolated from tomato had a retention time of 22.610 ± 0.007 min (mean \pm SD, n = 4). On the basis

of the indistinguishable mass spectra and the small but reproducible difference in retention times, we conclude that the compound we isolated from $\it L.~hirsutum~f.~typicum~PI~126445$ was actually 7-epizingiberene rather than α -zingiberene.

LITERATURE CITED

Barton, D. H. R.; Shioiri, T.; Widdowson, D. A. Biosynthesis of terpenes and steroids. Part V. The synthesis of ergosta-5,7,22,24(28) tetraen-3 β -ol, a biosynthetic precursor of ergosterol. *J. Chem. Soc. (C)* **1971**, 1968–1973.

Barton, D. H. R.; Lusinchi, X.; Ramirez, J. S. Improved synthesis of 1,2,4-triazoline-3,5-dione derivatives of ergosterol and a new method for their conversion to ergosterol. *Tetrahedron Lett.* **1983**, *24*, 2995–2998.

Breeden, D. C.; Coates, R. M. 7-Epizingiberene, a novel bisabolane sesquiterpene from wild tomato leaves. *Tetrahedron* **1994**, *50*, 11123–11132.

Eigenbrode, S. D.; Trumble, J. T.; Millar, J. G.; White, K. Topical toxicity of tomato sesquiterpenes to the beet armyworm and the role of these compounds in resistance derived from an accession of *Lycopersicon hirsutum* f. *typicum*. *J. Agric. Food Chem.* **1994**, *42*, 807–810.

Millar, J. G. Rapid and simple isolation of zingiberene from essential oils. *J. Nat. Prod.* **1998**, submitted for publication.

JF9802979

S0021-8561(98)00297-0 Published on Web 04/23/1998

ENZYMATIC DETERMINATION OF GALACTOSE AND LACTOSE IN HONEY, by A. Val, J. F. Huidobro*, M. P. Sánchez, S. Muniategui, M. A. Fernández-Muiño, and M. T. Sancho. *J. Agric. Food Chem.* **1998**, *46*, 1381.

Under Specificity, the first sentence of the second paragraph should read "Besides lactose, β -galactosidase also splits lactulose (disaccharide of galactose and fructose), but in the literature, we have not found data about this disaccharide in honey.

JF980320Q

S0021-8561(98)00320-3 Published on Web 04/22/1998